Effect of Web-based Mental Health Intake System on Parent/Provider Satisfaction

COL Ryo Sook Chun, MD

Chief, Child and Adolescent Psychiatry Service (CAPS)
Walter Reed Army Medical Center

Washington, DC

Sona P. Patel, MPH

Research Associate, CAPS
Walter Reed Army Medical Center

Washington, DC

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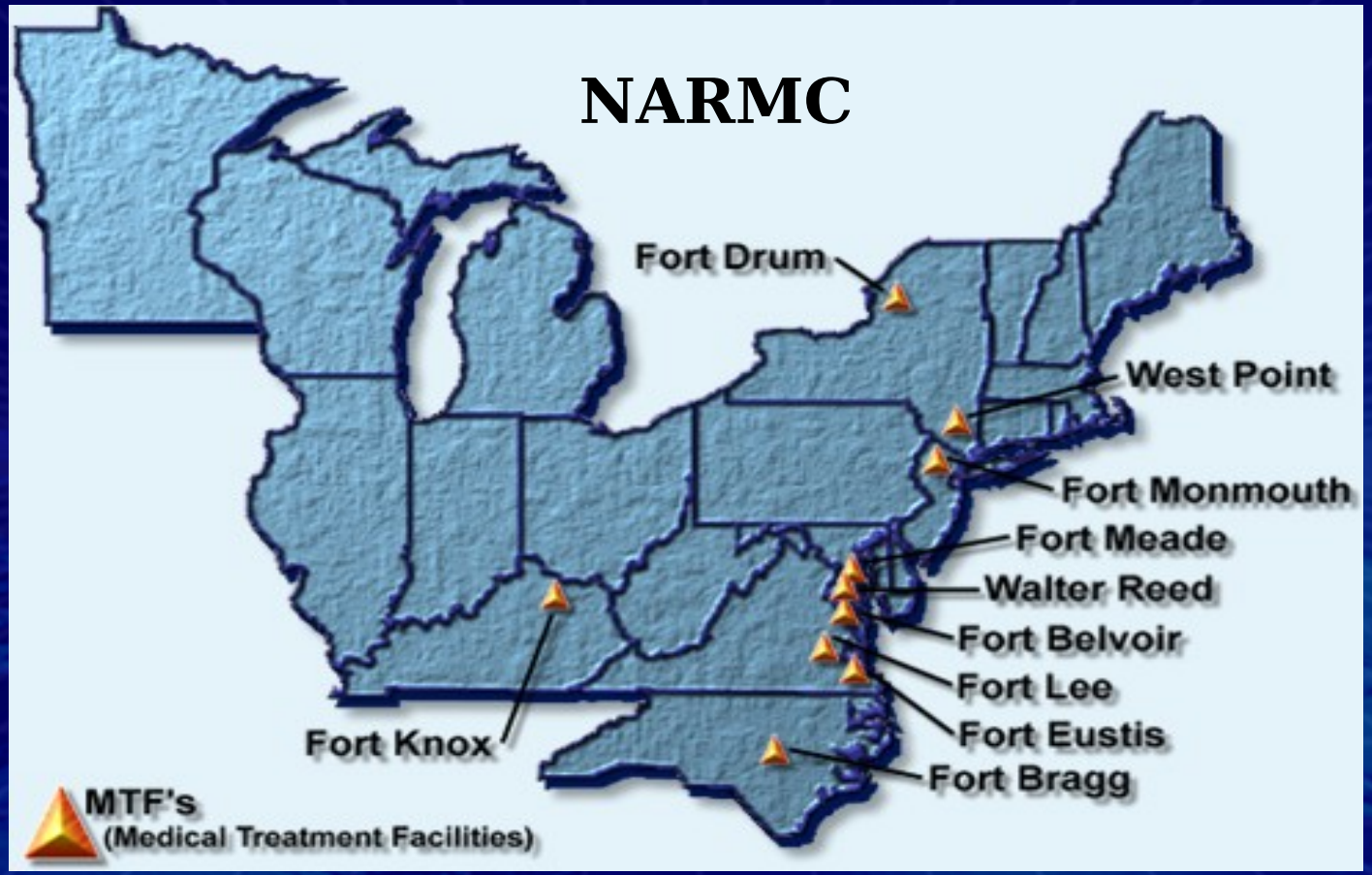


Defining WAMHIS

- A web-based clinical data collection system
- Allows parents to provide information securely and confidentially from their homes and/or work via the Internet; replaces paper-based forms
- Data feeds into a database via secure web-based forms using 128-bit encryption and secure-socket technologies

How Does WAMHIS Work?

- At the time a parent schedules an intake appointment, he/she receives instructions to access and enter the system

- The parent completes the intake form and additional behavior checklists on the Internet and submits it to the database

- Application is HIPAA compliant

Research Study Design

(reviewed and approved by WRAMC IRB)

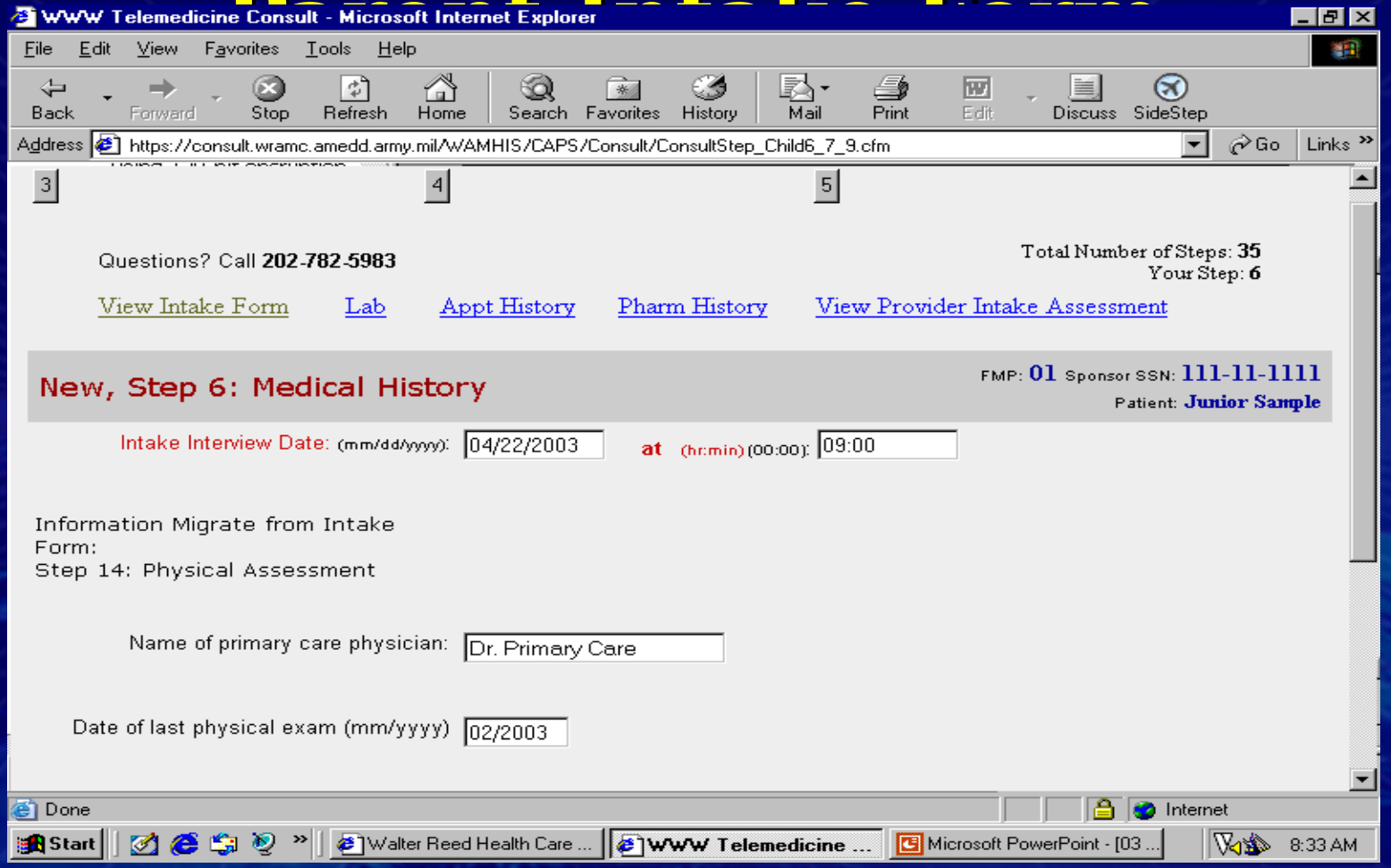
- 90 parents of child/adolescent patients assigned to 3 groups (sequentially offered enrollment)
  - **Group 1** – Parents complete WAMHIS forms at home prior to the appointment
  - **Group 2** – Parents complete WAMHIS forms in the clinic at the time of the appointment using a clinic computer
  - **Group 3** – Parents complete traditional paper forms in the clinic at the time of the appointment
- Parent satisfaction surveys given after forms completed
- Assigned providers complete surveys on experiences in clinical work with the three groups and overall impression of WAMHIS

Measurement Tools Used for Research

- **Parents: (n = 30 in each group)**
  1. **Satisfaction with the Patient Information Forms**
     - Different versions depending on whether *paper* forms or *WAMHIS* completed by parent
     - Derived from the CSUQ (Computer System Usability Questionnaire), an IBM Computer Usability Satisfaction Questionnaires (Lewis, 1995)

- **Providers: (total of 10 providers)**
  1. **Satisfaction with Intake system (after each intake interview)**
  2. **Satisfaction with Report Writer (after each use of report writer)**
  3. **Satisfaction After Initial Use (completed once)**
  4. **Satisfaction After Final Use (completed once)**

Clinician View of Completed Parent Intake Form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Go Links
3 4 5
Questions? Call 202-782-5983
Total Number of Steps: 35
Your Step: 6
View Intake Form Lab Appt History Pharm History View Provider Intake Assessment
New, Step 6: Medical History
FMP: 01 Sponsor SSN: 111-11-1111
Patient: Junior Sample
Intake Interview Date: (mm/dd/yyyy): 04/22/2003 at (hr:min) (00:00): 09:00
Information Migrate from Intake Form:
Step 14: Physical Assessment
Name of primary care physician: Dr. Primary Care
Date of last physical exam (mm/yyyy) 02/2003
Done
Internet
Start
Walter Reed Health Care ...
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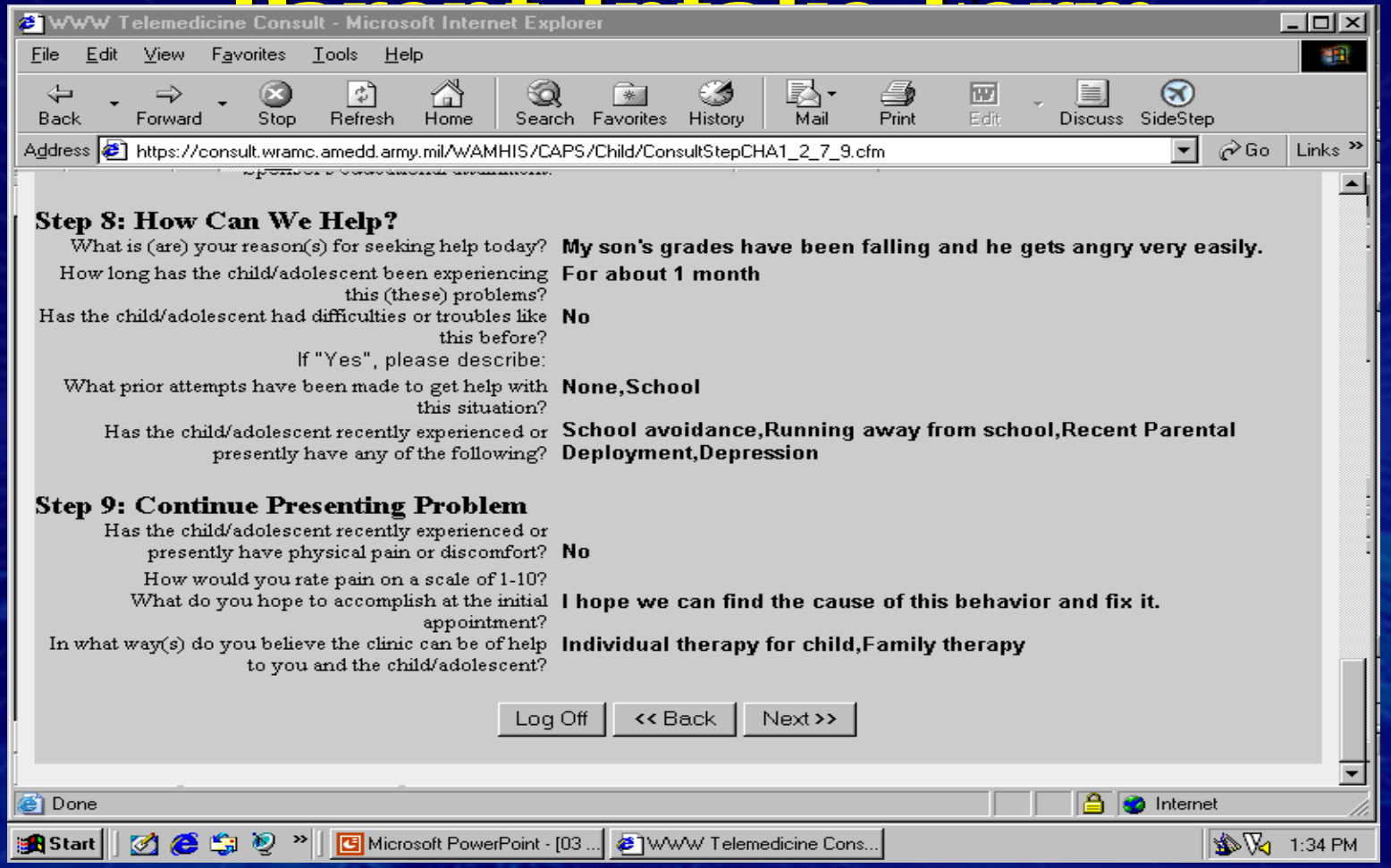
Clinician View of Completed Parent Intake Form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Step 8: How Can We Help?
What is (are) your reason(s) for seeking help today? My son's grades have been falling and he gets angry very easily.
How long has the child/adolescent been experiencing this (these) problems? For about 1 month
Has the child/adolescent had difficulties or troubles like this before? No
If "Yes", please describe:
What prior attempts have been made to get help with this situation? None,School
Has the child/adolescent recently experienced or presently have any of the following? School avoidance,Running away from school,Recent Parental Deployment,Depression
Step 9: Continue Presenting Problem
Has the child/adolescent recently experienced or presently have physical pain or discomfort? No
How would you rate pain on a scale of 1-10?
What do you hope to accomplish at the initial appointment? I hope we can find the cause of this behavior and fix it.
In what way(s) do you believe the clinic can be of help to you and the child/adolescent? Individual therapy for child,Family therapy
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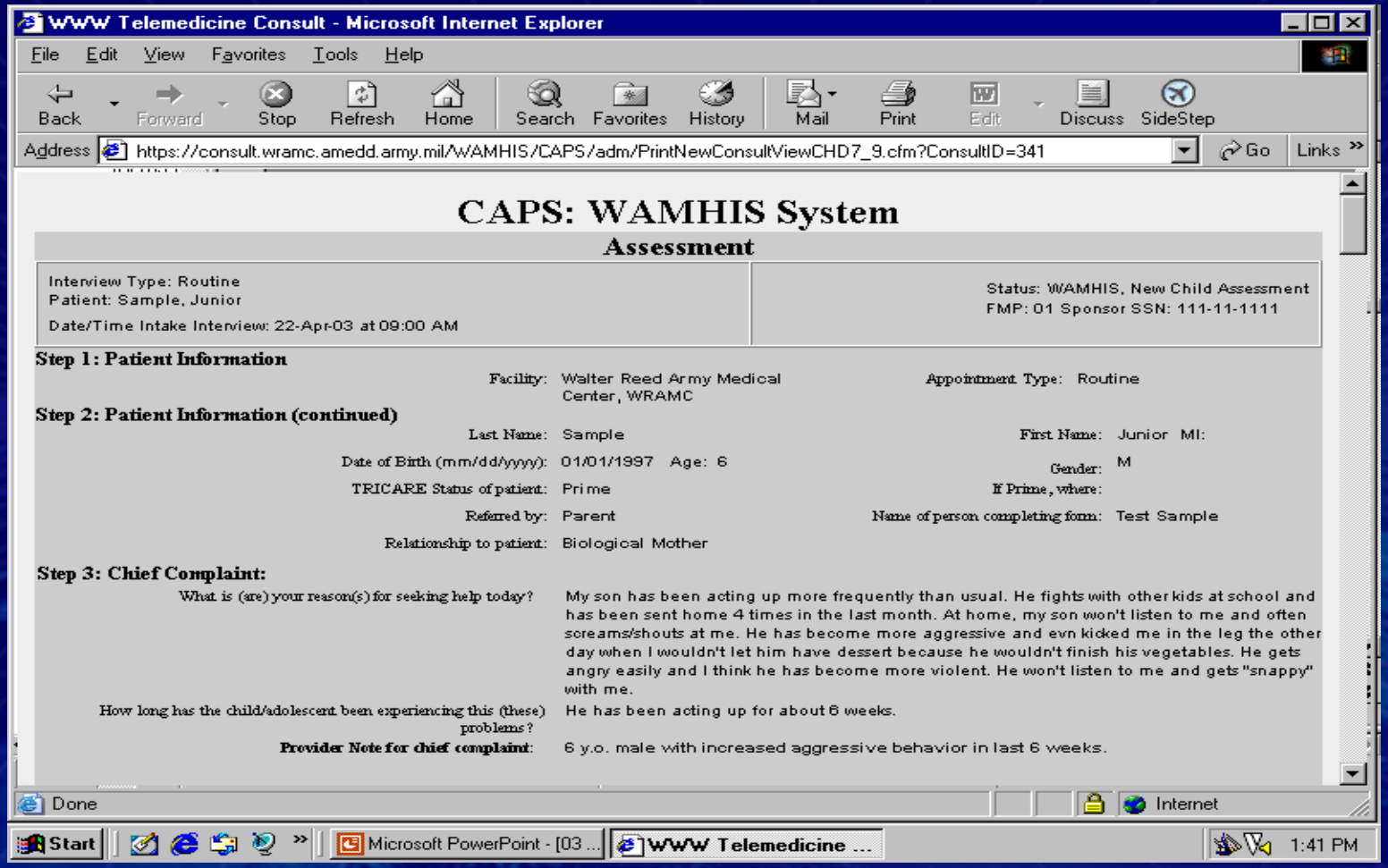
Clinician View of Provider Intake Assessment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Address https://consult.wramc.amedd.army.mil/WAMHIS/CAPS/adm/PrintNewConsultViewCHD7_9.cfm?ConsultID=341
Go Links
CAPS: WAMHIS System
Assessment
Interview Type: Routine
Patient: Sample, Junior
Date/Time Intake Interview: 22-Apr-03 at 09:00 AM
Status: WAMHIS, New Child Assessment
FMP: 01 Sponsor SSN: 111-11-1111
Step 1: Patient Information
Facility: Walter Reed Army Medical Center, WRAMC
Appointment Type: Routine
Step 2: Patient Information (continued)
Last Name: Sample
First Name: Junior MI:
Date of Birth (mm/dd/yyyy): 01/01/1997 Age: 6
Gender: M
TRICARE Status of patient: Prime
If Prime, where:
Referred by: Parent
Name of person completing form: Test Sample
Relationship to patient: Biological Mother
Step 3: Chief Complaint:
What is (are) your reason(s) for seeking help today?
My son has been acting up more frequently than usual. He fights with other kids at school and has been sent home 4 times in the last month. At home, my son won't listen to me and often screams/shouts at me. He has become more aggressive and evn kicked me in the leg the other day when I wouldn't let him have dessert because he wouldn't finish his vegetables. He gets angry easily and I think he has become more violent. He won't listen to me and gets "snappy" with me.
How long has the child/adolescent been experiencing this (these) problems?
He has been acting up for about 6 weeks.
Provider Note for chief complaint:
6 y.o. male with increased aggressive behavior in last 6 weeks.
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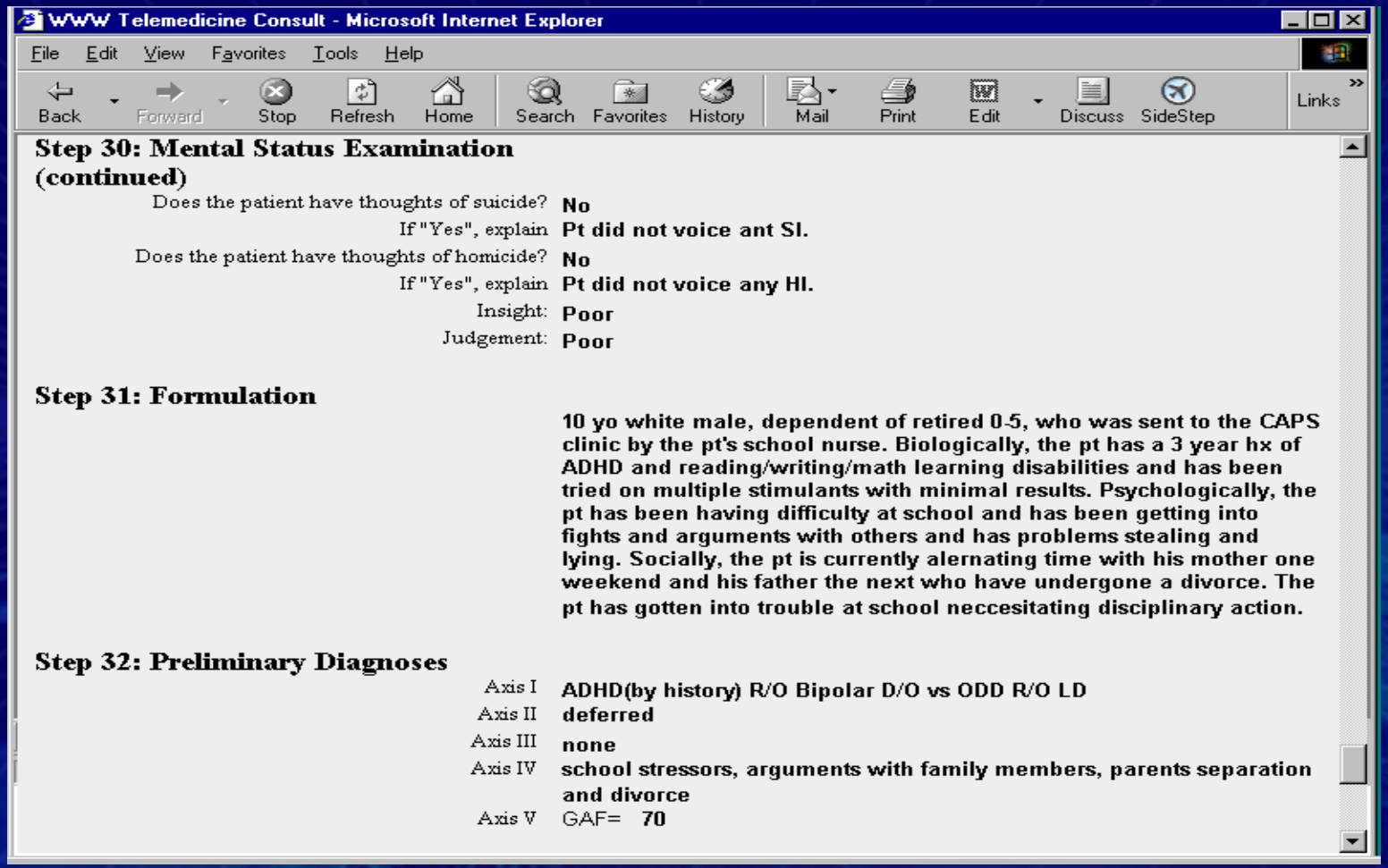
Clinician View of Provider Intake Assessment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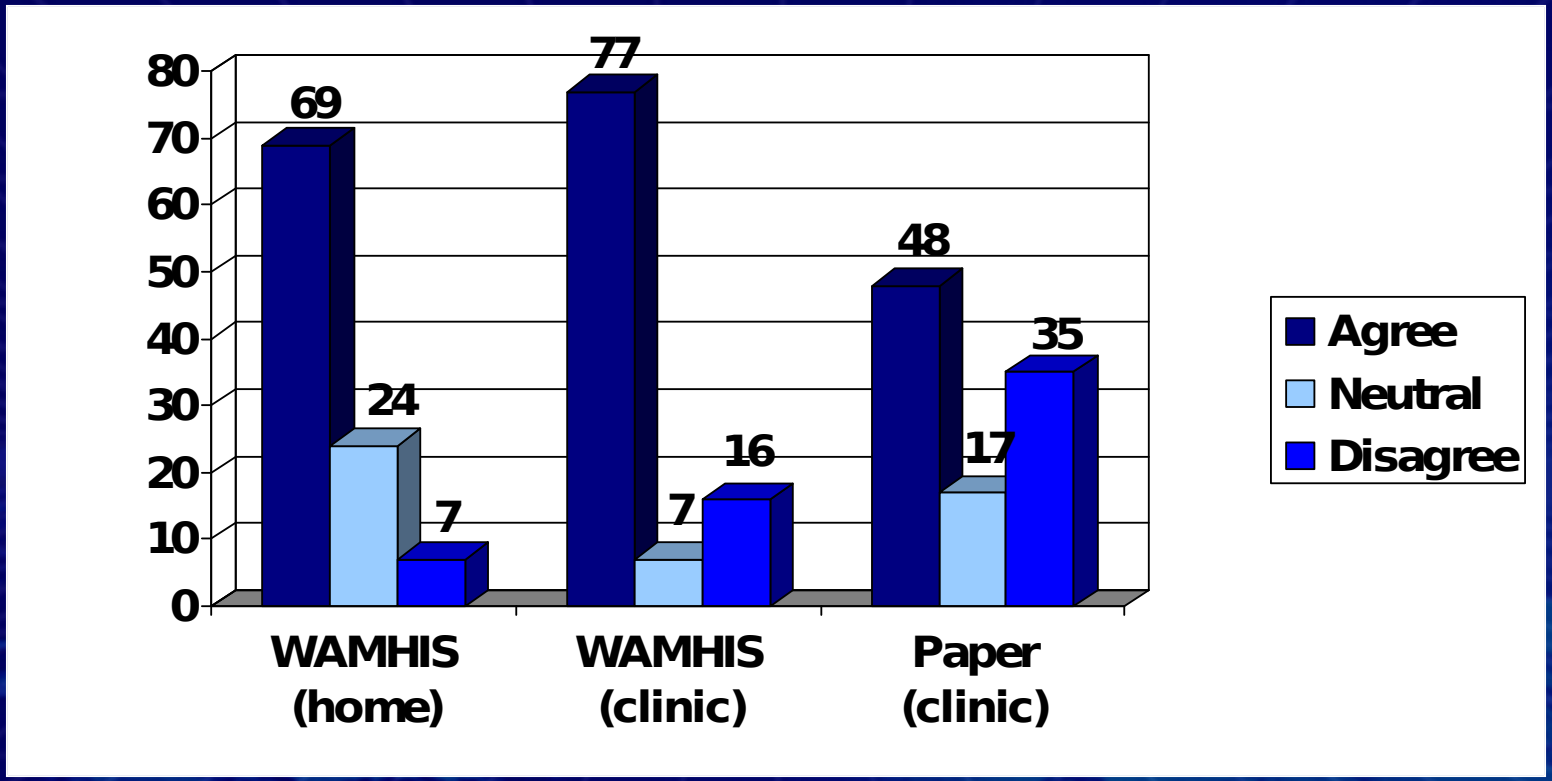
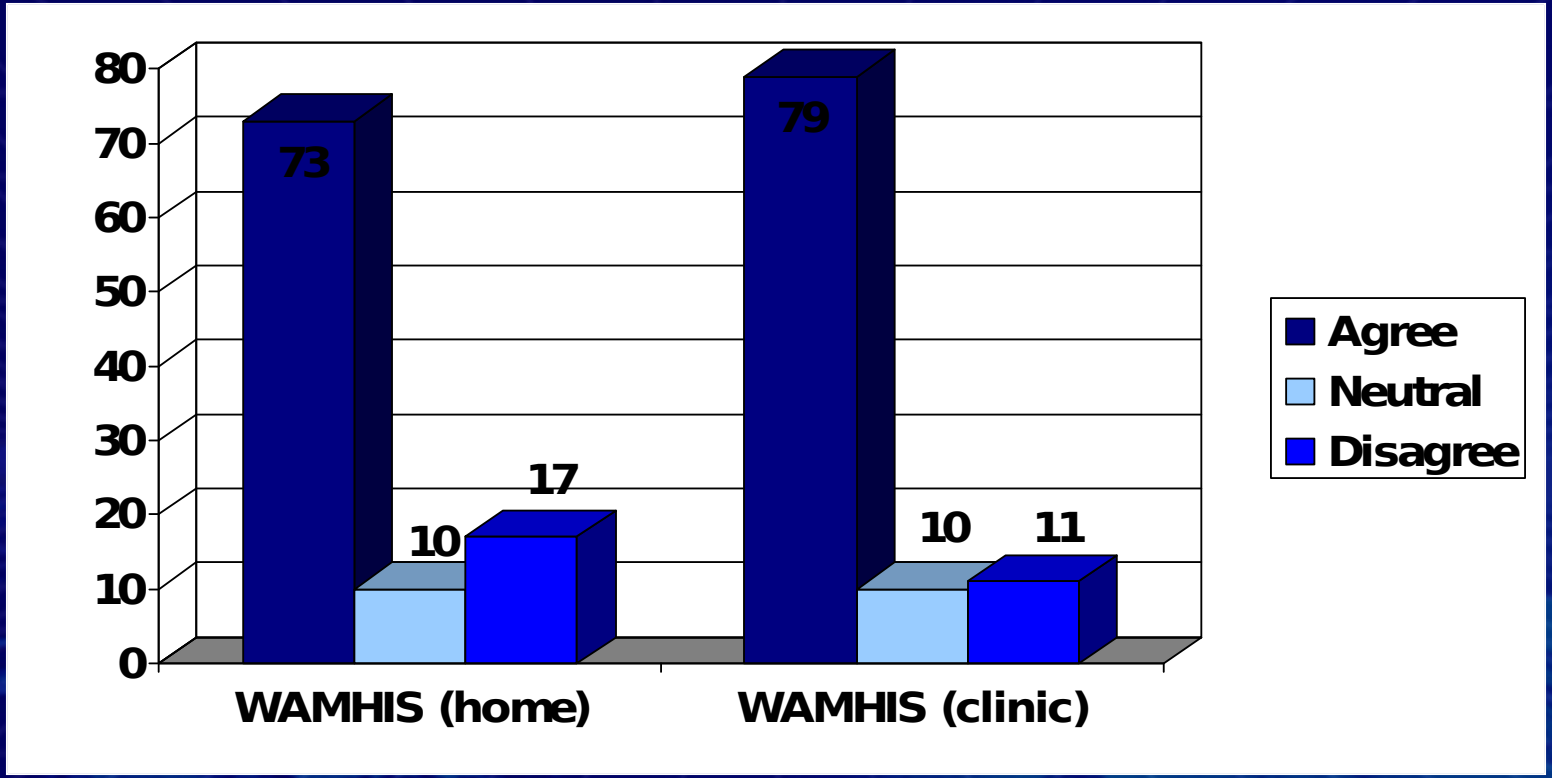
Step 30: Mental Status Examination (continued)
Does the patient have thoughts of suicide? No
If "Yes", explain Pt did not voice ant SI.
Does the patient have thoughts of homicide? No
If "Yes", explain Pt did not voice any HI.
Insight: Poor
Judgement: Poor
Step 31: Formulation
10 yo white male, dependent of retired 0-5, who was sent to the CAPS clinic by the pt's school nurse. Biologically, the pt has a 3 year hx of ADHD and reading/writing/math learning disabilities and has been tried on multiple stimulants with minimal results. Psychologically, the pt has been having difficulty at school and has been getting into fights and arguments with others and has problems stealing and lying. Socially, the pt is currently alernating time with his mother one weekend and his father the next who have undergone a divorce. The pt has gotten into trouble at school neccesitating disciplinary action.
Step 32: Preliminary Diagnoses
Axis I ADHD(by history) R/O Bipolar D/O vs ODD R/O LD
Axis II deferred
Axis III none
Axis IV school stressors, arguments with family members, parents separation and divorce
Axis V GAF= 70

Parent Satisfaction



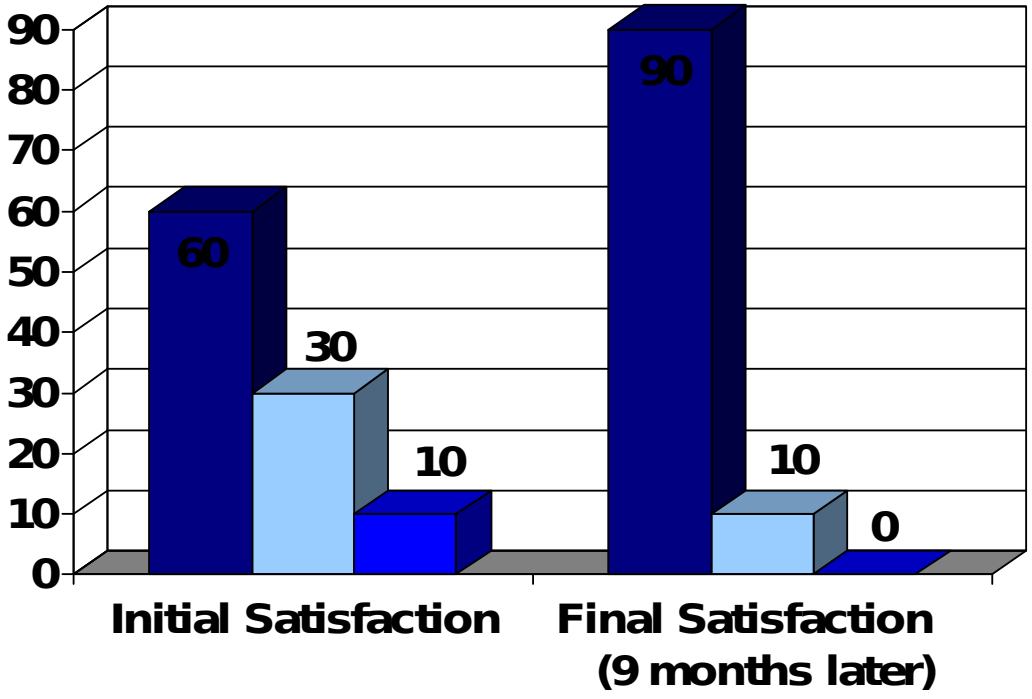
"Overall, I am satisfied with the method I used to complete the paperwork."

Parent Perception of WAMHIS Security



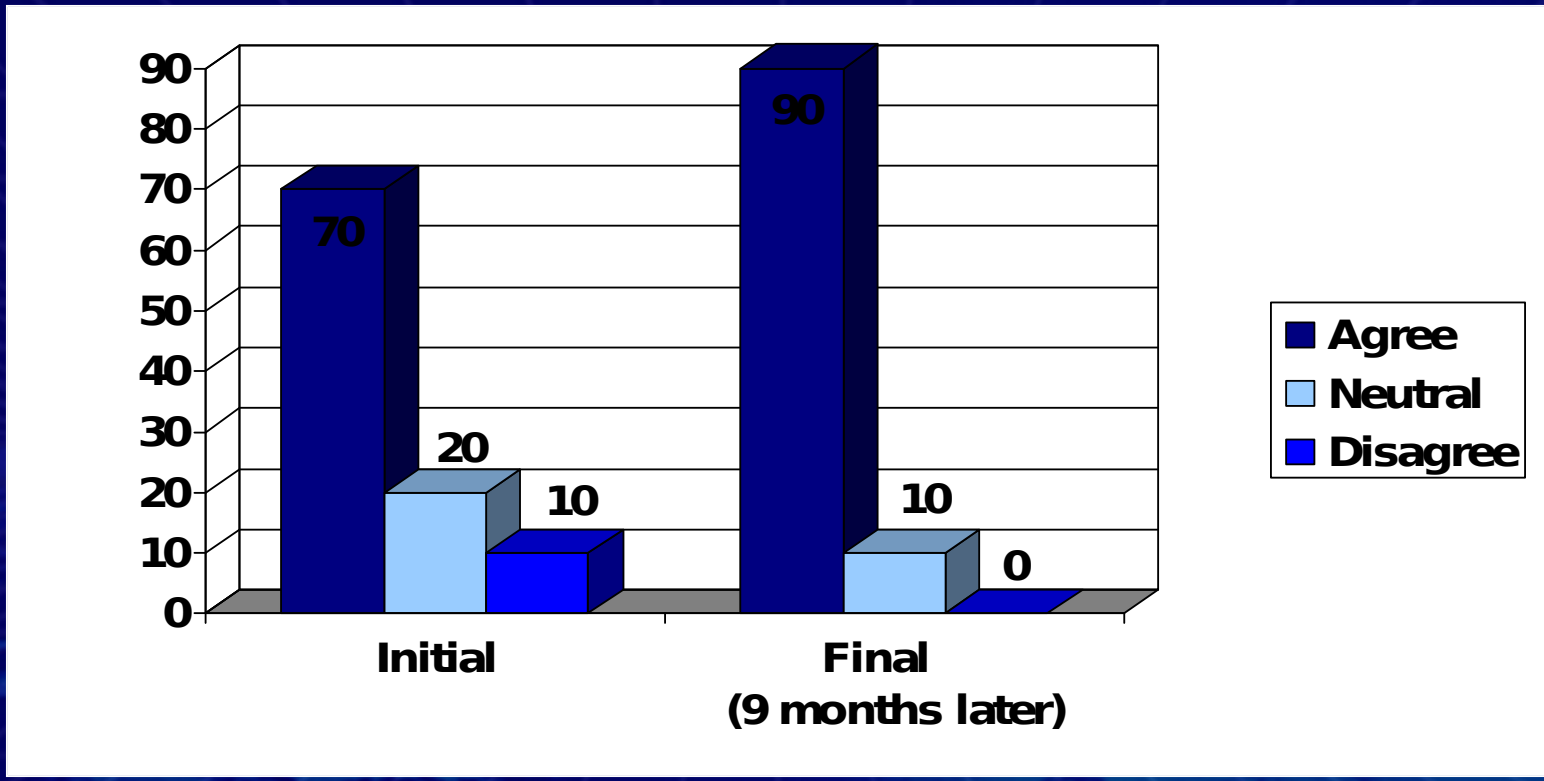
"Overall, I am confident that WAMHIS is <u>secure</u>."

Provider Satisfaction



"Overall, I am satisfied with WAMHIS."

Provider Perception of WAMHIS Security



"Overall, I am confident that WAMHIS is secure."

Initial Weaknesses / Limitations of WAMHIS for Providers

- Slow server and unpredictable server outage
  - **Solution**: Database relocated onto new server and server reboot time changed to 4 a.m.
- Automatic logoff function too brief
  - **Solution**: Changed from 10 min. to 60 min. per step
- Difficult to distinguish information on printouts
  - **Solution**: Modified and adjusted (i.e., font size, margins)
- Main Menu functions and design complicated
  - **Solution**: Simplified Main Menu options

Strengths of WAMHIS (Parent Perspective)

- Reduced waiting time to see provider
- Increased access to intake forms via Internet
- Both parents/guardians able to complete online forms together → beneficial when one parent/guardian unable to attend the intake appointment
- Easier than paper-based forms; ability to take more time to fill out paperwork without rushing

Strengths of WAMHIS (Provider Perspective)

- More time efficient
- Easy to use; user-friendly
- Providers off-site able to access patient data and draft patient assessments via Internet; enhances **Telepsychiatry** services
- Efficiency using WAMHIS increased with increased use and practice
- Ability to review patient clinical information prior to appointment

Conclusions

- Overall high parent satisfaction with WAMHIS
- WAMHIS was helpful to clinicians esp. when server issues resolved
- Clinicians had greater opportunity and time to review clinical information with WAMHIS
- Parental investment in completion of WAMHIS may improve appointment compliance
- Important to continue to modify system to address parent and clinician feedback
- Potential to use WAMHIS as a component of a health e-record